# LETTERS

FROM

# HONORABLE P. FORTIN, M.P.

ON THE

# TELEGRAPH AND SIGNAL SERVICE SYSTEM

IN THE GULF OF ST. LAWRENCE

ON THE

## UNITED STATES SIGNAL SERVICE

AND ON THE

## NORWEGIAN TELEGRAPH SYSTEM.

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# LETTERS FROM HON. P. FORTIN, M.P.

## ON THE TELEGRAPH AND SIGNAL SERVICE SYSTEM IN THE GULF OF ST. LAWRENCE; ON THE UNITED STATES SIGNAL SERVICE; AND ON THE NORWEGIAN TELEGRAPH SYSTEM.

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## THE GULF SYSTEM.

(Translation.)

OTTAWA, 28th November, 1881.

No. 19591.

SIR,—In the early part of the month of May, 1875, six large steamers carrying over one thousand persons and valuable cargoes in addition, were considerably delayed, some of them for several weeks, in their course through the gulf of St. Lawrence. They were of course the vanguard of the fleet of steamers which enter our ports of Quebec and Montreal every year.

Great anxiety resulted in Canada, in the United States and in Europe, as may well be fancied. There were no means of communication whatsoever with the coasts or islands near which these vessels might be. Had they foundered on the high seas? Had they been driven ashore by the ice? Or were they simply detained by an impassable ice barrier, at the entrance of the gulf? No one knew, no one could know.

The idea of a telegraphic system for our coasts and the islands of the gulf, was mooted in consequence of the commotion caused in maritime circles by fears for the safety of those vessels. I must add that it then became evident that a powerful auxiliary was needed for the navigation of the St. Lawrence. The press received the suggestion with favor, and the ship-owners and seamen gave it their best support, for they saw that it was a new means of developing the navigation of that magnifi ent river.*

In 1876, a committee of the House of Commons, after an examination of the proposed system of telegraphs, its advantages and probable cost, reported strongly in favor of the establishment of the system.

The Government soon took the matter in hand, for public opinion evidently demanded it; and in 1879, a sum of $35,000 was voted by Parliament, of which $20,000 was for a coast line between Halifax and Canso. The remaining $15,000 was to be an annual permanent grant offered in order to induce capitalists to construct and work the telegraphic system of the Magdalen Islands and Anticosti.

But the attempt did not succeed, for the undertaking seemed to be a hazardous one, though it was not so in reality.

In the following year, 1880, $10,000 of the grant of $15,000 was capitalized at 5 per cent, which gave ($200,000) two hundred thousand dollars; and so soon as that amount had been voted by Parliament, the Department of Public Works began the work in earnest. A special service was organized in that Department, called "The Telegraph and Signal Service," and it was placed under the superintendence of Mr. F. N. Gisborne, whose acquirements and skill in all matters relating to land or marine telegraphy are well known.

I have recurred to these facts in this letter for the purpose of shewing that it was only after five years of work and enquiry that the idea of coast telegraphs as an adjunct to the navigation of the gulf and river St. Lawrence was put in execution:

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*See letter, page 19.

Since then the work of constructing the land lines and laying the electric cables has been carried on with reasonable rapidity. The work has been well and economically done, and the materials used are of the best quality. The Magdalen Islands and Anticosti systems estimated at ($200,000) two hundred thousand dollars, have cost in fact only ($180,000) one hundred and eighty thousand dollars, and with the balance most useful coast lines have been constructed in Nova Scotia and New Brunswick, besides among others the system of Grand Manan Island.

I give below a statment for which I am indebted to the kindness of Mr. Gisborne, showing the lines in operation and the number of miles of land telegraph in operation and the number of miles of submarine cable laid.

## I.

### MAGDALEN ISLANDS AND CAPE BRETON SYSTEM.

The system consists of:—

83½ miles of line on Magdalen Islands.

54 99/100 miles of electric cable between Magdalen Islands and Cape Breton, and the line from Meat Cove to Sydney 113½ miles, to which must be added 13 for the Baddeck line, making a total of 126½ miles,

There are (9) nine stations in operation on the Magdalen Islands and in Cape Breton (12) twelve stations.

## II.

### The Island of Anticosti.

This system consists of the following:—

Line from Gaspé Basin to Anse à Fougère, 28 miles.

Electric cable between Anse à Fougère and the Island of Anticosti, 44 miles;

Line on the Island of Anticosti, 213¾.

There are (7) seven telegraph stations, of which four are also signal stations, in full operation on the Island of Anticosti.

## III.

### NORTH SHORE OF THE RIVER AND GULF OF ST. LAWRENCE.

This system includes the following:

A line between Bay St. Paul and Chicoutimi; this is a branch line for the Saguenay navigation; length, 92 miles. (6) Six stations in operation.

The principal line starts from Malbaie (Murray Bay). It was commenced last year and, this fall, reached the village of Mille Vaches.

A cable one mile in length was laid across the Saguenay.

Line from Murray Bay to Mille Vaches, 86 miles.

There are (8) eight stations in operation.

## IV.

### COAST LINE FROM HALIFAX TO CANSO, N.S.

This system consists of a line erected along the coast, which will hereafter be placed in communication with the lighthouses erected on the Islands bordering the coast, by means of semaphores.

Length, 210 miles.

There are (17) seventeen stations in operation.

## V.

### GRAND MANAN ISLAND SYSTEM.

This system consists of a line crossing the island at its greatest width, a length of 28¼ miles, with a cable $9\frac{18}{100}$ miles connecting the island with the main land opposite.

There are (6) six stations in operation.

This gives for the Province of Quebec:
502¼ miles of land line,
74 " electric cable.
For the Province of Nova Scotia:
364¼ miles of land line,
36 " electric cable.
For the Province of New Brunswick:
28¼ miles of land line,
$9\frac{18}{100}$ " electric cable.
Total.
Telegraph lines on land, 895½ miles.
Submarine electric cables, 119 "
Total number of Stations, 65.

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## GULF OF ST. LAWRENCE.

### PROPOSED LINES.

The Magdalen Islands and Anticosti systems being completed and in full operation, we must deal with the line on the north shore.

At first it was considered impossible to reach the Strait of Belle-Isle, in view of the apparent difficulty of such an undertaking, at certain points on the coast. But, in 1878, after further examination, the idea of extending the line to Forteau Bay, in the Strait of Belle-Isle, was mooted and received with favor by the press and the public. The more the matter is looked into the more it becomes evident that, inasmuch as the whole of the steam fleet and many sailing vessels have adopted the Strait of Belle-Isle as the most direct and shortest route from the Atlantic to Quebec and Montreal, they should be afforded facilities in the form of telegraphic communication with the coasts, harbors and bays of that Strait.

Now at the present moment, these coasts which are almost uninhabited, and which are sterile and afford no resource except the fisheries, are still entirely without communication either by postal service or by telegraph, with the rest of the country. And if an accident happens to a vessel on these coasts there are no means whatever of promptly making known her dangerous position and of summoning help in time.

The interests of commerce then, urgently call for the extension of the telegraph line on the north shore as far as Forteau Bay, or rather to Point Amour (which is east of that bay and where there is a lighthouse and fog-whistle), to meet the requirements of navigation.

But we shall gain something more by the opening of this line, for when we have a telegraph station at Point Amour lighthouse, which will then be in constant connection with Canada, the United States, and in fact the whole world, it will be possible to land at Forteau Bay, which is easy of access at all times during the season of navigation, despatches, lists of passengers, private messages, &c., &c., after a run of five days only from Moville, Ireland. This would then be the most rapid route for the transmission of news from Europe to America by steamer, and in that respect it would confer an undoubted superiority on Canada. It would be in a sense a realization of the greatly desired five day journey between Europe and America.

As a matter of fact the sea voyage can only be said to last so long as you are on the wide seas, and, as it were, cut off from the world and utterly unable to communicate with the land, that is to say, during the ocean voyage between Moville and Forteau. Once that port made, vessels would once more be in communication with the whole world by means of the telegraph. What is still more, between Forteau and Quebec other means of communication would be available, viz :—

1st The telegraph stations and signal stations of the Island of Anticosti, nine in number;

2nd The stations on the south shore of the St. Lawrence from Gaspé to Quebec, numbering ten, being a total of nineteen.

It seems to me that this is a national work, that it forms part of the system of coast telegraphs, which should be put in operation as soon as possible if we desire to keep pace with our neighbours or compete with them successfully in the important matter of the carrying trade between Europe and America.

But I have been looking at the project under one of its aspects only. See what useful and profitable service this telegraph line would render to the vast and well known fisheries of Labrador and to vessels in distress on those remote and isolated coasts.

NORTH SHORE TELEGRAPH LINE CONSIDERED AS AN AUXILIARY TO THE FISHERIES.

The Government has been (and I think still is) negotiating with the Montreal Telegraph Company for the extension of this line next spring from Mille Vaches to Pointe des Monts.

Moreover, as there are no maritime fisheries or very few in this locality, the remarks I am about to make on the Labrador fisheries will apply only to the coast line extending from Pointe des Monts to Anse aux Blancs Sablons, the eastern limit of Canada, and Forteau is only twelve miles further east than Blancs Sablons.

I shall divide the coast into two parts :—The first extends from Pointe des Monts to Esquimaux Point, the latter point being an incorporated village with over fifteen hundred inhabitants, all fishermen.

Extent of coast, 190 geographical miles.

| | | |
|---|---|---|
| Number of | harbors and fishing stations | 25 |
| " | fishing schooners | 44 |
| " | fishing boats | 445 |
| " | men employed in the fisheries | 2,113 |

The second part extends from Esquimaux Point to Anse aux Blancs Sablons, the eastern limit of Canada, and thence to Forteau Bay, which is only 12 miles further.

| | | |
|---|---|---|
| Extent of coast in geographical miles | | 290 |
| Number of | harbors and fishing stations | 25 |
| " | fishing schooners | 22 |
| " | fishing boats | 298 |
| " | men employed in the fisheries | 820 |

Value of products of the various fisheries of this coast in 1880, $1,401,288.95.—One million four hundred and one thousand two hundred and eighty-eight dollars, ninety-five cents.

I take the following from the report, 1880, of the officer in charge of the expedition for the protection of the fisheries in the Gulf of St. Lawrence, Dr. Wakeham.

In the chapter headed "Cod," page 76 of his report, the Doctor says, speaking of the north shore:—

"This fishery has been one of unusual abundance. The season was far advanced "before the fishing began, but there seemed to be no limit to the quantity of fish. "The various fishing establishments were taxed to the utmost to handle the fish, "and in some cases there was a scarcity of salt for curing purposes. Had we had "telegraphic communication with the north shore, as I trust we will have before

" very long, many of our south shore fishermen would have abandoned the fishing on " the south shore and taken themselves and appliances across to the north shore " where the fishing was so good.

* * * * * * * * *

" There must have been at least 500 schooners cod-fishing off St. Augustine and Bonne Espérance Divisions."

Dr. Wakeham estimates at 175,000 cwts., the quantity of cod taken by these schooners, most of which belong to the Maritime Provinces.

Thus Dr. Wakeham does not hesitate to assert that with a telegraph line on the north shore, the south shore fishermen who for whole months took hardly anything, might have been notified by means of the electric telegraph to go to the north shore, a distance of only one day's sail, there to gather an abundant harvest, in the vast field cultivated by the hands of Providence itself, without the help of man, and take their share of the rich and varied yield of cod, herring and every species of smaller fish upon which the former prey, which furnish an article of food so wholesome and so easily shipped to foreign countries.

But this is not all. On the eastern part of this coast, that is to say, from Esquimaux Point to Anse aux Blancs Sablons, the fishing schooners go from harbor to harbor, from fishing post to fishing post, seeking for cod and herring, but they are as it were groping in the dark, and when they are in one harbor they do not know what is taking place on the rest of the coast. They are simply " trying their luck."

Sometimes they succeed. But have I not, myself, during the sixteen years that I commanded the service for the protection of the fisheries in the Gulf of St. Lawrence, many a time seen from twenty-five to fifty schooners anchored for weeks in some harbor waiting for cod or herring? But the shoals of fish had struck the coast elsewhere, and while in neighboring harbors, great takes were being made, these vessels were waiting their chance, not knowing, and quite unable to know, what was taking place at other points of the coast on either side of them. The unfortunate fishermen were meantime a prey to depression and weariness during those days of enforced idleness, which destroyed their brightest hopes.

But the telegraph would completely alter the face of things in these waters, since the fishermen whether residents of the coasts or belonging to schooners frequenting them yearly for the purpose of fishing, would know on what part of the coasts, near what harbor, the shoals of fish abound and where the bait run in. In short they would follow the trail of the fish as the hunter follows game on land.

I may say, moreover, that all who are well acquainted with the north shore and the coast of Labrador are firmly convinced of the utility or rather the necessity, of a telegraphic line on this coast.

Now with regard to the erection of this line, I leave it to those who are skilled in such matters to say whether we can or cannot reach Forteau all the way by means of lines erected on land along the coast. I may say, however, that between Esquimaux Point and Forteau there are many serious difficulties in the way of erecting a line of the kind, on account of the islands and rocks bordering the coast; at some points the islands extend as far out as twelve miles from the shore. Now, telegraph or signal stations can only be of use when located on the islands in the offing, where the harbors used by the fishermen are located.

Within the last few years great improvements have been made in sub-marine cables, and the cost has been much reduced, so that submarine lines might be used for a great portion of this telegraphic system. From Point des Monts to Esquimaux Point there can be no serious difficulty whatever in the way of erecting a land telegraph the whole way along the coast, so that telegraph and signal stations can be placed at all the chief harbors and fishing stations.

Between Esquimaux Point and Forteau, if submarine electric cables have to be used, as will probably be the case, the cables may be submerged along the coast, in many places inside the outer islands and rocks and be made to connect one important harbor or fishing place with another.

As the result of my own study of the matter, of the information I have gathered and of my experience derived from sixteen years of cruising on this coast, I would point out the following as the harbors or fishing stations where the submarine cables should touch and where there should be telegraph or signal stations:

| | Miles. |
|---|---|
| 1. Esquimaux Point | 0 |
| 2. Nataskuan (the Harbor) | 65 |
| 3. Coacoachou | 65 |
| 4. Little Mecatina | 48 |
| 5. Great Mecatina | 18 |
| 6. La Tabatière | 5 |
| 7. St. Augustin | 25 |
| 8. Bonne Espérance | 36 |
| 9. Bradore Bay | 15 |
| 10. Anse aux Blancs Sablons | 8 |
| 11. Bay of Forteau | 12 |
| | 297 |

12. A station at Nataskuan Point connected with the Harbour of Nataskuan.

SHORT DESCRIPTION OF THE SEVERAL HARBORS ABOVE MENTIONED.

1. Esquimaux Point is an excellent harbor, capable of sheltering two hundred or more vessels of any tonnage. The village has over 1500 inhabitants, all fishermen, owning twenty-three (23) schooners and a large number of fishing boats, all employed in catching seal, cod and herring in the Gulf of St. Lawrence.

2. The harbor of Nataskuan is capable of affording perfect shelter to 200 fishing schooners. There is also an anchorage for vessels of the largest tonnage.

Along the Nataskuan Coast, in the vicinity, and on the banks in the offing, cod is always to be found in abundance. Nataskuan has always been considered one of the best fishing grounds of the whole north shore. It is in consequence resorted to each year by a large number of fishing schooners, chiefly from the Maritime Provinces.

There are several fishing establishments in the harbor, and the population consists of some fifteen families. At a distance of three miles towards the south, is the well known Nataskuan river, one of the most productive salmon rivers of the north shore.

3. Coacoachoo, at the entrance of the river of that name, is one of the best harbors on this coast. It is capable of sheltering a whole fleet of large vessels. It is situated a few miles west of Cape Whittle, which is at the entrance of the Strait of Belle Isle. Though there are no important fisheries in the vicinity of this harbor, still it would be an advantage to connect it with the telegraphic system, for it might serve as a port of refuge for the large steamers navigating these waters in case of their being disabled.

4. Little Mecatina Island has two good harbors for fishing-schooners, and there are good cod-fishing grounds in the vicinity. Moreover, it stands high out of the sea and is visible from a long distance, and vessels navigating the strait may require to run in there for shelter.

5. Great Mecatina is also a lofty island easily identified from a distance off, and in its vicinity is the harbor of Bay des Moutons, one of the best and most frequented of the whole coast.

A large number of schooners from the Province of Quebec and the Maritime Provinces resort to it every year, and the fishing banks of the vicinity are excellent and easy of access. Bait is also, generally speaking, abundant.

6. La Tabatière (Fish Harbor) is one of the best seal fishing grounds of the whole coast. It is also inhabited by several families.

7. St. Augustin consists of a group of islands lying off the mouth of the river of

that name, and not less than twelve miles from the main land. It has always been an important centre for the seal, salmon, cod and herring fisheries. There are several good and well known harbors in this group of islands.

8. Bonne Esperance is one of the best known and most frequented harbors of the coast, like Bay des Saumons, whose waters flow into it. It lies off the mouth of the river St. Paul or Quitzaqui, a river of considerable magnitude and renowned as a salmon river ever since the discovery of Canada.

In former days large numbers of Esquimaux and Indians lived on this part of the Labrador coast, and when Jacques Cartier visited it for the first time, the French had already a stone fort erected and mounted with cannon to meet their assaults. This fort had been built at the head of a large bay, which was then called the "Port de Brest." It is now "Old Fort Bay," and is situated a few miles to the west of the St. Paul River.

The cod fisheries of Bonne Espérance and Baie des Saumons are about the most productive on the north shore.

9. Bradore Bay has long been celebrated for its seal, herring and cod fisheries. The Spaniards had large fishing establishments here, before the French entered these waters.

Bradore has always been an important centre. There are here two harbors for vessels of every class. A large number of fishing vessels resort to this locality every year for the cod and herring fisheries, the latter being the well-known Labrador herring. In the vicinity of Bradore, at Anse des Dunes, I have seen as many as six hundred (600) barrels of herring taken in one haul with a seine.

10. Anse aux Blancs Sablons is a celebrated and well known locality.

There are several large fishing establishments there, and it is the yearly resort of some two or three hundred fishing schooners attracted by its cod and herring fisheries, which are generally speaking most productive.

Blancs Sablons Bay is sheltered by two islands, Ile à Bois and Ile Verte. At this place, I have often seen boats manned by two men only, take as many as one thousand cod and even more in a single day. A large number of fishing schooners gather in this harbor every year.

The eastern boundary line of Canada, is at the head of this bay near the mouth of a small river. Beyond is Labrador, under the jurisdiction of Newfoundland.

11. Forteau Bay is one of the finest on the whole coast, it offers great facilities for the cod and herring fisheries. There are a number of residents engaged in fishing and hunting. The largest vessels can run in here at all times, day or night, while the navigation is open in the Strait of Belle-Isle. There is a good anchorage and good shelter from all winds. On the east side is Point Amour, on which stands one of the finest lighthouses in America. It is a lofty tower built of stone, brick and cement, furnished with a Fresnel dioptric light, which is visible from the other side of the strait, a distance of over 15 miles. It is also furnished with a steam whistle for the guidance of vessels in foggy weather.

This is the point I recommend as the terminus of the North Shore telegraphic line.

Before concluding I would point out that the whole network of sub-marine cables starting from Esquimaux Point and extending towards Forteau, and in its course connecting all the harbors and fishing stations I have enumerated, can nearly everywhere, be submerged inside the outer islands, and will therefore be sheltered from the ice which sometimes grounds on the coast.

It may not be out of place to mention here that on the 30th June, 1862, when on board the "Napoléon III," I found an iceberg aground at the entrance of Forteau Bay, where it lay for over a month, in twenty-five fathoms of water. It stood at least seventy (70) feet above the water. Its total height was therefore two hundred and twenty feet. I climbed the iceberg with four of my crew.

The telegraphic systems above mentioned on the island of Anticosti, the Magdalen Island and Grand Manan Island, were commenced, completed and put in operation under your administration. To you, sir, also should fall the honor of completing, by

the extension of the north shore line to Forteau, the coast telegraphic system of the gulf of St. Lawrence, which will be of such vast service to shipping, to trade and to the fisheries of Canada. You will doubtless have no difficulty in obtaining from Parliament the means for prosecuting energetically the work of construction already begun on this north shore line, so that it may reach Forteau within a few years.

I cannot conclude without calling your attention to a number of short telegraphic lines which should be erected in order to connect several important points on the sea coasts of the Provinces with the telegraphic system of Canada.

I would mention specially:

1. A line about 16 miles in length to connect the east point of Prince Edward Island with the telegraphic system of that island.

2. A line one tenth of a mile in length to connect Cape North Lighthouse on that island with the same system.

3. A line of 20 miles in length to connect the lighthouse at Point Escuminac, the southern point of Miramichi Bay, with the telegraphic system of New Brunswick.

4. Another line of about 16 miles in length to connect the extreme eastern point of Cape Sable Island with the port of Barrington, Nova Scotia.

### COAST LINE TELEGRAPHS IN THE UPPER LAKES.

I have not spoken as yet of the great lakes, that unbroken chain of inland seas which enables us to penetrate to the heart of the continent of North America, as a field to which the system of coast telegraphs might be applied with advantage.

It is not that I am unwilling to admit their usefulness for our inland navigation, but it is hardly two years since the Government began the erection of coast telegraph lines, and it seemed to me to be proper that the coasts of the Gulf of St. Lawrence, our great commercial highway, should receive before all others, the benefit of this powerful agent which annihilates time and distance. But now that the telegraphic systems of the Gulf of St. Lawrence have been in good part constructed, and we are in hopes of seeing the whole completed within a few years, it is natural that public attention should be directed towards the great lakes, the inland and not least important portion of the great highway of the St. Lawrence.

Canada holds the north shore of the following great lakes: Erie, Ontario, Huron, and Superior. Now the following is the approximate length of the Canadian coast of each of these lakes, in English miles:

| | | |
|---|---|---|
| Lake Ontario | 250 | miles. |
| " Erie | 290 | " |
| " Huron, including Georgian Bay | 620 | " |
| " Superior | 400 | " |
| Total | 1,560 | miles. |

I must say that I have not as yet fully informed myself as to the real requirements of navigation on these lakes, as to coast telegraphs, but I can at least recommend what is most urgent and necessary, namely, telegraphic lines starting from the lighthouses erected on the most prominent points and their connection with the nearest telegraph line, thus placing these lighthouses, which would all serve as points of observation, in permanent connection with the telegraphic system of Canada.

I would mention specially Long Point, Rondeau Point, and Point Pelée in Lake Erie; Salmon Point on Lake Ontario, &c., &c.

Once the system of coast telegraphs is put in operation on the shores of the lakes, the signal system will follow of itself and in a short time the whole lake fleet will at last adopt the international code of signals. Thus vessel owners on the one hand will be enabled to follow their vessels from point to point, and the vessels themselves will be enabled to call promptly for all needed assistance in case of accident, grounding, &c., &c.

I append to this letter a testimonial in favor of the coast telegraph system and

its further extension along the north coast of the Gulf of St. Lawrence, signed by all the agents of Maritime Insurance Companies at Montreal, and two others, one from J. B. F. Painchaud, Collector of Customs of the Magdalen Islands, and the other from Messrs. Ritchie & Co., relating to services rendered to shipping by the telegraph system of the Magdalen Islands.

I have the honor to be, Sir,
Your obedient servant,

P. FORTIN.

To the Honorable
Sir HECTOR L. LANGEVIN, K.C.M.G., C.B.,
Minister of Public Works.

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(Translation.)

MAGDALEN ISLANDS, AMHERST HARBOR,
*Vid* PICTOU, 7th December, 1881.

SIR,—In the interest of the telegraphic lines established on these islands, I have the honor to send you the enclosed letter just received from the important mercantile house of D. & J. Ritchie & Co., of Newcastle, N.B., showing the service rendered to them by the line, when their vessel, the "Jardine Bros.," went ashore in September, on these islands. The same was the case with the ship "Governor;" and if I was enabled to transmit the message to the master and give him the instruction received it was thanks to the telegraph line. With the help of good counsel, these vessels whose safety was imperilled, were enabled to escape from difficulties which might have been fatal, and as shewn by the letter, the "Jardine Bros," and "The Governor" were floated without serious damage.

You are at liberty, Sir, to make use of this letter and even to publish it, if you consider it useful to do so, in the interests of the telegraph, which it is now evident we could not do without.

I have the honor to be, Sir,
Your most obedient servant,

J. B. F. PAINCHAUD,
Collector of Customs.

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Hon. P. FORTIN, M.P.

NEWCASTLE, N.B., 28th November, 1881.

DEAR SIR,—We write you at present to state that we desire to bear you our testimony to the very great value we attach to the cable and telegraph lines established and connected with your islands, and which in our opinion is likely to prove a great boon to shipping interests generally and especially of the Dominion. We have to acknowledge the very material benefit we have received from the said communication on the occasion of the stranding of our vessel the "Jardine Brothers" on the Magdalens in September last. Owing to the established line we were enabled to get immediate advice from our captain and could at once communicate with him and send such instructions which, together with the *assistance rendered*, probably saved said ship from becoming a wreck, but which in this case was floated without any serious damage or expense attending. The writer had the opportunity of being on the spot at the time and had the satisfaction of seeing the ship proceed on her voyage from England to Newcastle, N.B. There is no doubt that the established telegraph lines connecting with your islands is of the highest importance to all ship owners and others who may be similarly circumstanced as ourselves, and you are at liberty to publish the above if you wish.

We remain, dear sir,
Yours truly,

D. & J. RITCHIE & CO.

F. B. F. PAINCHAUD, Esq.
Collector of Customs,
Magdalen Islands.

## UNITED STATES SIGNAL SERVICE.

OTTAWA, 22th November, 1881.

SIR,—I think it my duty to lay before you the following letter which General Hazen, Chief of the United States Signal Service, did me the honor of sending to me in the month of August last.

After merely glancing at the chart which accompanies it one can form an idea of the magnificent signal system which exists in the United States.

In Canada we are progressing in the same direction. Let us endeavor to be their rivals and even their superiors if such is possible in increasing the extent and efficiency of such works, which have as their object the succoring of our fellow men, and the lessening the losses to those engaged in navigation, occurring through shipwrecks.

I have the honor to be, Sir,
Your obedient servant,

P. FORTIN.

The Hon. Sir HECTOR L. LANGEVIN, K.C.M.G., C.B.
Minister of Public Works.

## WAR DEPARTMENT.

OFFICE OF THE CHIEF SIGNAL OFFICER,
WASHINGTON CITY, 5th August, 1881.

SIR,—I have the honor, in compliance with your letter of the 12th ultimo, to enclose a description of the sea coast telegraph lines of this service, connecting the life saving stations, with a map of the longest sections of the line.

The connections with Block and Thatchers Islands, referred to in the text, are so short that I have not thought it necessary to send a map of them.

I shall be very glad to furnish any further information, if that enclosed shall be found insufficient.

With assurance of my regard, believe me,

Very truly, yours,

W. B. HAZEN,
*Brigade and Brevet Major General,*
*Chief Signal Officer, U.S.A.*

MR. P. FORTIN, M.P.,
Member of the House of Commons,
Canada.

### DESCRIPTION.

On March 3, 1873, Congress authorized the establishment of signal service stations at lighthouses and life-saving stations on the lakes and sea coast, and made provision for connecting the same with telegraph lines or cables.

Since that date lines have been built from Sandy Hook, New Jersey, south along the coast to Cape May, New Jersey; from Delaware Breakwater, Delaware to Chincoteaqui, Va.; from Norfolk, Va., *vid* Cape Henry, Va., Ketty Hawk, Cape Hatteras, Cape Lookout and Wilmington to Smithville, N. C., the total distance is about 540 miles.

In order to connect these with the office of the Chief Signal Officer, wires are leased from the Western Union Telegraph Co., viz:—from Cape May, N. J., *vid* Philadelphia, Pa., Baltimore, Md., and Washington, D. C., to Norfolk, Va., and from Delaware Breakwater, Del., to Philadelphia, Pa.

The follcwing have been built and are operated by the signal service, but are merely connected with the Western Union Telegraph Company, viz:—from Narragansett Pier *vid* Point Judith to Block Island, R.I., and from Rockport to Thatcher's Island, Mass. All are operated on the Morse system.

The following are the stations where meteorological observations are taken and cautionary signals displayed on the above, viz:—Thatcher's Island, Mass; Point Judith, New Shoreham and South East Light, Block Island, R.I.; Sandy Hook, Barnegat, Atlantic City and Cape May, N.J.; Delaware Breakwater, Del.; Chincoteaqui, Norfolk and Cape Henry, Va.; Kitty Hawk, Hatteras, Portsmouth, Fort Macon, Wilmington and Smithville, N.C. Repair stations are located at Manasquan and Little Egg Harbor (Life Saving Station No. 23), M.J.; Ocean City, Md.; Life Saving Station No. 6, (near False Cape), Cape Lookout, New River and Sloop Point, N.C. From Cape Henry to Kitty Hawk, there is a second line which connects the eleven intermediate Life Saving Stations with them by telephone, thus bringing the two branches of the Government service (Treasury and War) into united relations to each other.

The stations on the coast line are fully equipped with meteorological instruments for observations and signal apparatus for communicating with vessels passing or in distress. The practical result of the system is, *first*, to warn passing vessels of approaching storms, so they may seek shelter; *second*, in case of vessels being in distress to quickly summon the aid of the Life Saving Crews and the Wrecking Co. and to notify interested parties; *third*, Hatteras is a valuable station for first feeling the effect of a hurricane approaching the coast from the south and south-east.

During the building of the Cape Henry-Kitty Hawk section a vessel having a cargo of tea was stranded. The aid of the Norfolk Wrecking Co. was at once summoned. Both the vessel and cargo were saved, in advance of a severe storm which swept the coast. The value of the cargo was more than three times the cost of that section.

In case of vessels in distress temporary stations are opened abreast the same on the beach for the purpose of giving such personal assistance as may be possible, and for transmitting all information without any delay by wire to this office, to Wrecking Companies, Boards of Trade, Chambers of Commerce, &c.

It was found necessary to introduce into the lines drawn on accompanying map, twenty-seven lengths of submarine cable, to cross inlets which are navigable to small craft, and where on account of the low banks and the necessities of navigation, a suspended wire could not be used. The total length of these cables is eighteen miles, the shortest single length is thirteen yards, the longest forty-five hundred and eighty-one yards.

Thatcher's and Block Islands on the New England coast are connected with the shore by cables which are respectively twenty-six hundred and forty yards, and ten miles in length.

The average cost of building the line, the labor having been done by troops, is about seventy dollars per mile. The average cost of establishing the stations is one hundred (100) dollars per station; the yearly average cost of maintaining station is three hundred (300) dollars; yearly average cost of maintaining line is thirty-six hundred and four (3,604) dollars for a total of about five hundred and forty (540) miles. This is exclusive of pay of troops and operators.

No rent is paid at Life-Saving Stations.

All signal service men are instructed in telegraphy, and the sea coast lines are operated on the Morse system, excepting the telephone line from Cape Henry to Kitty Hawk.

The accompanying Chart shows all U. S. lines operated by the signal service. All other signal service stations of observatians, &c., than those on the sea coast telegraph lines, are in telegraphic communication with this office through the lines of the Western Union (principally) and other telegraph companies.

## THE NORWEGIAN TELEGRAPHIC SYSTEM.

(Translation.)

OTTAWA, 28th November, 1881.

SIR,—The task which I have imposed upon myself, and which I have the honor to bring before your notice, would be incomplete if I did not send you the following short notice upon the telegraphic system of Norway. A country which in respect to its climate, the industrial occupations engaged in there, the fisheries, the timber trade, the extent of water communication, the coasting trade, the configuration of its sea coasts, much resembles our Maritime Provinces and the Province of Quebec.

Norway has a sea coast of over 1500 nautical miles in extent, measured in a direct line, but by following the indentation of its bays and fiords, some of which are 60 miles in depth, the figure of 2,000 miles, at least, is reached.

This coast line fairly bristles with points, capes, &c., girt about with rocks and islands, some of which are forty miles in the offing. All these taken together go to make the coast navigation of Norway very dangerous.

All the prominent points on these coasts whether parts of the mainland, of an island, or of a rock, are united by telegraph wires or cables forming part of the Telegraphic System of Norway.

What study, what work of genius I may say, was required to conceive and carry out such system, and to keep it constantly in thorough working order, it is almost impossible to express.

As the work of seamen it is one worthy of the descendants of the Norsemen.

I cannot state in what year this telegraphic system was perfected, but the following extract from a report of the English Vice-Consul at Christiania would make it appear that in 1866, the greater part of the system was already in operation.

*Extract from the report of the Vice-Consul General of Her Majesty at Christiana upon the cod and herring fishery in Norway, for the year* 1866.

"That part of the population directly or indirectly interested in the fisheries numbers about 150,000, and the number of fishermen regularly employed at the present time is 60,000.

"These latter in their boats come and go along the coasts, according to the reports which reach them as to the signs or prognostics, for example the appearance of the straw-herring, sea birds, whales, &c., &c., and formerly, before they had the telegraph wire to procure speedy information for them, the impossibility in their position of verifying the correctness of the reports, and the great distances they had to traverse to reach the neighborhood of the fishing banks, were the causes of numberless disappointments and deceptions, and often the catch was not as great as it might have been owing to the lack of hands to take the fish. All this has greatly changed since, especially as concerns the herring fishery.

"There are telegraph stations already constructed, and others are in course of erection at the principal points along the coast, and the inspectors require that directions should be every day posted up at each of the stations upon the appearance and position of the banks, and they keep up a constant communication with all the stations in operation.

"Field telegraphs are always ready to connect with the main line, and in this way the slightest movements of the banks of fish are attentively watched and promptly signalled, and it is a curious sight to see the sudden exodus of thousands of fishermen, with their accompanying train of buyers, salters, &c., with their equipage of boats, barrels and apparatus pushing forward towards a distant spot at the summons of the telegraph wire. The men seem to extol highly this important assistant, and in the cases where the success of the fishing is owing to its intervention they call their fish telegraphic herrings. The inspectors post up every morning in the various stations a statement of the quantity of fish taken the day before, and at the same time they quote the price per barrel and they carry on this

duty until after the spawning season, which is easily ascertained by the water assuming the colour of the milt.

"This fishery lasts for three months, but the profitable fishing only lasts six weeks or about that, during which they take from ten thousand up to twenty thousand tons each week.

"The advantages which the telegraph will probably secure are incalculable, for it will not be confined to rendering greater the produce of the cod and herring fishermen, but will permit the inhabitants scattered here and there along the coast and the banks of the great Fiord, to gather at places determined upon, during other seasons of the year, and to give close attention to other fisheries less important but very numerous in this country, and especially the summer herring fishery, a very fat fish and highly esteemed, which, for its delicacy of flavor and its size, rivals successfully the Dutch and Northern herring."

The short description which follows displays, on one hand, the numberless difficulties which require to be overcome to carry out a similar work, and on the other hand the extent and perfection of the works which ensures a perfect action throughout the whole system, even to the most retired parts of Norway, as far as the 70th degree and 35 minutes of north latitude, that is to say, fourteen hundred (1,400) geographical miles further north than Quebec.

DESCRIPTION.

This system may be divided into three classes:

The first includes the telegraphic lines of the interior, of which the most important are found between the capital Christiania and Trondhjen, about 300 miles in length. In the second place there are the railway lines about 500 miles. In the third place the sea or coast lines, nearly 2,000 miles in length.

Commencing at the boundary line of Sweden, the coast line telegraphic system, composed at times of several lines, and again of a single line, makes the circuit of the fiord at the bottom of which Christiania is built; then it reaches the coast, by proceeding in a westerly direction, at the Bay called Skager Rack, which separates Norway from Denmark, as far as Stravanger, on the Atlantic—the North Sea—having a length of 370 miles.

A submarine cable of 15 miles in length crosses the entrance of a great fiord and the line proceeds from Skudesnœs to Bergen, one of the great sea ports of Norway, a distance of 100 miles.

Within this circuit two large islands are connected with the mainland by submarine cables, 15 miles and 12 miles long respectively. These islands are Utsire and Rövœr.

Brandesund, an island situate thirty miles further to the north, is also connected by a submarine cable with the mainland line.

From Bergen, the telegraphic line runs along the coast, sometimes crossing the mouths of fiords by means of submarine cables, at other times going round them, and it reaches Christiansund after a course of about 300 miles.

On the route it crosses over some fifteen fiords by means of cables of from 1 to 3 miles in length.

Several islands and rocks which occupy important positions on this part of the coast are joined to the principal line by cables varying from two to ten miles in length.

Eighty miles further on the line passes into Trondhjen, a sea port situate on one of the largest fiords in all Norway.

About 330 miles further to the north, the line reaches Lödingen, an important sea port on a large fiord which lies on the 68th parallel of north latitude.

In this circuit there are several branch lines, each from 20 to 40 miles in length, which connect islands, rocks, ports or places with the main line.

At Lödingen, we find ourselves opposite to the famous group of the Lofoden islands, about 120 miles in length, especially notable for its cod and herring fisheries.

A system of land lines and sub-marine cables, about 200 miles in length, connects

all the islands of this group with one another as well as all the ports, harbors and fishing localities where the fishing boats betake themselves, and the whole are joined to Lödingen.

We have already reached a point which is about twelve hundred (1,200) nautical miles more northerly than Quebec. But the coast line telegraph system of Norway does not end here, it continues to girdle the coast as far as Hammerfest, which we know to be the most northerly sea-port in the world. Then it proceeds across Laponie up to within a few miles of the famous North Cape, the most northerly portion of the mainland of Europe. It is in north latitude 70 degrees, 30 minutes,—fourteen hundred and ten (1410) miles further north than Quebec, and eleven hundred and forty (1140) miles than Forteau Bay in the Straits of Belle-Isle.

In all there are about 2,500 miles of telegraphic lines of all kinds. Some sixty sub-marine cables of from 1 to 20 miles in length, form connecting links in this system.

There are on the coast lines more than 130 telegraph and signal stations, of which 15 are upon the Lofoden islands.

CONCLUDING STATEMENT.

The telegraph offices may be placed in several categories :—

There are offices, of the permanent service.
" " of the full day.
" " of limited service.
" " open during the winter, that is during the fishing season only.
" " attached to railways.

Such, in a few words, is what a nation, of an especially maritime character, having a population of 1,760,000 and a territory 121,000 square miles in extent, (two-thirds the size of the Province of Ontario), has done in aid of its shipping, and its fisheries.

It seems to me to have set an example, well worth following by such a country as Canada, which possesses such an extent of sea coast and fisheries so varied and so important.

I have the honor to be, Sir,
Your obedient servant,

P. FORTIN.

The Honorable
SIR HECTOR L. LANGEVIN, K.C.M.G.,C.B.
Minister of Public Works.

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(Translation.)

OTTAWA, 8th December, 1881.

SIR,—The coast-line telegraphic system of the Gulf of St. Lawrence, and the shores of the Maritime Provinces, has already been made use of for purposes of great consequence to the mercantile navy, the commerce and the fisheries of Canada. But there is still another not previously mentioned which is of no less importance.

Many foreign and home vessels set out every year, in ballast, from foreign ports and often very distant ones in order to enter our waters seeking for cargoes of timber, especially at Montreal, Quebec, Miramichi, St. John, and other ports of less importance.

The larger proportion of them arrive in the Gulf without knowing where they can procure freight.

Some of the vessels stop at Sydney, C.B., others go to Gaspé, while others again proceed to other ports; from these places they announce their arrival to their agent seeking cargoes for them.

And often, of course, they are obliged to go to other ports where freight is more easily obtained and more profitable. But in this case they are obliged to enter two harbors, and consequently pay double pilotage fees and other charges; they also run more or less danger of losing their sailors by desertion, and they waste their time.

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The coast line telegraph can remedy this, in many cases, in a very simple way, which, besides, is already in use in other countries.

This will be done with the aid of the coast line telegraph stations, of which the Government owns nearly forty on the shores and islands of the Gulf of St. Lawrence.

The manner of accomplishing it will be as follows:—The government will give notice in advance, at the custom house of the principal maritime countries of the world, that the new service is in operation at such and such telegraph and signal stations, the names of which would be given in the notice.

The ship owners who send the vessels to Canada, in ballast, to obtain cargoes of timber there, will give instructions to their captains to stop opposite one of these signal stations, when they have entered the Gulf St. Lawrence, to lie to at a reasonable distance, to signal the names of their vessels by means of the International code of signals, and to enquire for any despatches there may be for them at the station. So soon as the vessels are despatched, the shipowners write by the quickest route to agents, who transact this kind of business, in the Ports of Quebec, Miramichi, St. John or elsewhere, to look for freight for such and such vessels. The letter reaches its destination long before the vessels, which are sailing vessels of ordinary speed.

The Agent as soon he has found a freight, hastens to make this fact known to the Superintendent of the Government Signals, who sends a telegraphic despatch containing everything connected with the freighting vessel, to all the Government signal and telegraph stations, in operation in the Gulf of St. Lawrence.

Soon after this, these vessels enter the Gulf of St. Lawrence, and they direct their courses to the stations most convenient for them according to the winds they have had and the time made, then each vessel will go and lie to opposite one of these stations, and spell out its name by means of signal-flags, as I have mentioned before.

The signal-man examines his journal and discovers that he has received a short time previous a message with instructions to convey it by means of signals to the vessel, whose number they have given him, as found in the official list of vessels, appended to the book containing the national code, and he immediately communicates this message by means of the code signals, and by this message he has told the vessel to proceed to a certain port where a cargo of timber awaits her.

The vessel has only to bear off, fill its sails, and make its way as quickly as possible to the port indicated.

And this is done without the vessel being obliged to put into any intermediate port, without casting the anchor, without incurring any expense. And in order to bring this new service into perfect operation at once, the Government need incur no expense. It has only to have it published throughout all maritime countries.

The Superintendents and the operators of our telegraph and signal stations will be able, without any difficulty, to put this new service into practical effect, after merely a few days study and trial.

I beg that you will kindly take this matter into consideration at your convenience.

If you decide upon putting it into operation, allow me to remark that it will be necessary to organise it in the month of January at latest, in order that it may be advertised in time and may be of use to the fleet which will visit the waters of the Gulf of St. Lawrence next spring.

This service will be useful to the timber trade, inasmuch as it will assist in some degree in facilitating the means of transport of our timber to Europe and more especially to England.

F. A. Schwartz, Esquire, the distinguished Consul-General of Sweden and Norway at Quebec, who has had a great experience in maritime affairs and shipping concerns, has kindly appreciated the projective system in a letter dated the 20th December, 1881, which I enclose.

I have, &c.,

P. FORTIN.

The Honorable
Sir Hector Langevin, K.C.M.G., C.B.,
Minister of Public Works,
Ottawa.

ROYAL SWEDISH AND NORWEGIAN CONSULATE,

QUEBEC, 10th December, 1881.

DEAR SIR,—In reply to your letter of yesterday, I have no hesitation in saying, that such a system for signalling as you propose, would not only give the facilities you mention to vessels coming out seeking after freights, in the manner you mention, but would also enable an owner residing in England, or on the other side, to keep the disposal of the vessel for a much longer time in his own hands, giving him the choice of either market.

Yours truly,

F. A. SCHWARTZ.

Hon. P. FORTIN, M.P.,
House of Commons,
Ottawa, Ontario.

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MONTREAL, 16th November 1881.

DEAR SIR,—In reply to your enquiry as to my opinion as an underwriter o ships and cargoes, of the value of the Government Gulf Telegraph System, and especially of the news of the SS "Lartington" lately wrecked on Anticosti which reached here promptly:

I beg to say on my own behalf as well as others interested in our navigation that this Gulf System of telegraphy is of inestimable value to the commerce of the country, it is impossible that any other opinion could be formed of it, the wisdom of the Government is conspicuously shown in the construction of these lines, and no time should be lost in extending them along the North Shore to Belle-Isle, either on land or by short submarine stretches.

I beg to say that I have seen several of my fellow underwriters and others and their names signed below endorse my views of the value of these lines.

M. H. GAULT, Agt.
Brit. America, Assu. Co.
THEODORE HART & SONS.,
for Commercial Mutual Ins. Co., of N Y.
and Union Ins. Co., of Philadelphia.
JACKSON RAE, Agt.
International Marine Ins. Co., Cinn.
PERCEVAL TIBBS, Agt.
Reliance Marine Ins. Co., Limited, of Liverpool.
HERRIMAN & ROSS,
Managers, B.M. Underwriters.
HENRY STEWART, Marine Underwriter
for Royal Canadian Insurance Co.
J. H. ROUTH & Co., Agts.,
Western Assurance Co.
J. F. NOTT & Co., Agts.,
The Marine Insurance Co., Ltd.
HENRY CHAPMAN, Agts.
Lloyd's Underwriting & Agency Association, London.

F. W. HENSHAW, Esq., President,
Montreal Board of Trade.

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## LETTER FROM THE MONTREAL BOARD OF TRADE ON THE GULF TELEGRAPHIC SYSTEM.

No. 19372.

OFFICE BOARD OF TRADE,
MONTREAL, 2nd December, 1881.

SIR,—Since the close of the shipping season, the Council of this Board has had its attention drawn to a number of particulars which afford further proof of the value of the extension of the Telegraphic system to the Gulf of St. Lawrence and Islands, inasmuch as the scheme being carried out by the Government has already led to the saving of live and property by making it possible to *render immediate assistance* to stranded or wrecked vessels. The importance of the project has, moreover, been made doubly valuable, inasmuch as by its instrumentality, efficient aid and succour was rendered very recently to distressed and famishing people on the Island of Anticosti. There can hardly be a doubt but that the weather and fishery bulletins which have been issued during a considerable part of the past season, have been of great service to the Gulf fishing interests of Canada.

The Council has watched with a great deal of interest, the progress that has been made from year to year since the project was initiated; and I am very respectfully to communicate to you its earnest hope that the work of extension will continue to be vigorously prosecuted, and especially that the North Shore Line may be continued to the eastward and along the Strait of Belle Isle to Point Amour, in Forteau Bay, for the substantial reason that such an extension would prepare the way for establishing a calling station during the season of navigation for steamships coming to, or going from, the St. Lawrence River.

I am therefore desired to solicit your consideration of what is herein submitted, and your decision in favor of the great maritime interest that would be promoted thereby.

I have the honor to be, Sir,
Your obedient servant,

WM. J. PATTERSON,
*Secretary.*

Hon. SIR HECTOR L. LANGEVIN, K.C.M.G., C.B.,
Minister of Public Works,
Ottawa.

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## TELEGRAPHIC COMMUNICATIONS WITH THE CENTRE OF THE GULF OF ST. LAWRENCE.

(*Letter from Hon. P. Fortin to the Editor of the Morning Chronicle.*)

QUEBEC, 6th May, 1875.

SIR,—The anxiety felt over the land, in reference to the six steamers ~~who~~ which are now and have been in the Gulf of St. Lawrence for the last ten or twelve days, and of ~~whom~~ which we have no tidings, is my apology for occupying your columns to-day.

It is too true, there are now six steamers, having on board several thousands of souls, and worth with their cargoes several millions, in the Gulf, helpless, and that for nearly a fortnight; and we *cannot* have any tidings concerning them until they have crossed the Gulf, a distance of about 200 miles, and entered the River St. Lawrence, where they can report at the telegraph stations of Cape Rosier or Fox River.

What prevents those steamers from passing through the Gulf? Field ice, no doubt, not icebergs, because none are seen south of Anticosti.

We presume those steamers are in closely packed ice, and there they cannot move at all or but little, until the continuance of the thaw has softened and disintegrated the ice, or until favorable winds or a tide race has opened them a passage.

As to their safety, I have not the least apprehension, if their commanders have used ordinary precautions, for, as we all know, the sea is as smooth as in a pond,

among field ice. I have been myself among field ice around the Magdalen Islands and in the Strait of Belle Isle with the *Napoleon III*, but I base my information principally on the reports of the sealing captains from the Magdalen Islands, Esquimaux Point, and Natashquan on the north shore, with most of whom I am personally acquainted. I have been a good deal among them during the last 23 years, and always took special interest in gathering from them all possible information with regard to the state and the movement of the ice in the gulf in fall, winter and spring.

We know how those hardy fishermen sail out of their harbours in March, with their schooners of from 25 to 60 tons (and many of them old and frail,) and traverse the Gulf in every direction through the field ice in quest of seals, and it is seldom that accidents happen to them. It is true, they are often caught in closely packed ice, with which they have to drift sometimes for weeks without being able to move out of it.

It is from those people that we should inquire whether winter navigation through the Gulf is practicable as a commercial enterprise.

Now I come to the point: I said it was impossible, in the present state of things, to have tidings from those steamers until they have crossed the Gulf and reported themselves at Cape Rosier or Fox River. But it might be otherwise for the benefit and advancement of this country.

We have in the middle of the Gulf nearly, and directly opposite to its main entrance, what I would call a sentry-box and vigilant sentinels in it.

They no doubt have seen those steamers pass them; they perhaps see them yet. They know the state of ice in which those steamers are fastened. If there are any means of relieving the latter, they know it too. They have seen the ice formed in the Gulf, they see it floating about. They know when it is beginning to disappear and when it is time for a steamer to attempt the crossing of the Gulf in the spring; and all this information that would be so useful to us, and which thousands on this side as well as on the other side of the Atlantic, would give so much to acquire, they cannot communicate it to us. An impassible barrier prevents it. For during six months in every year there is no communication between those rocks and any ports of our coasts.

The sentry-box is the Bird Rocks, and the sentinels are the three men who keep the lighthouse, erected on those rocks.

Would there be any possibility on the part of those men, who, perched as it were on those rocks, 140 feet above water (formerly a celebrated gannet rookery Sula Bassana) can see what is going on, every day that the weather is clear around them, over an horizon of 15 to 25 miles (and I have myself seen from the top of those rocks to the latter distance at least) and who witness the passing of nine-tenths of the steamers and more than half of sailing vessels, bound to Quebec or Montreal, close to them, as the Bird Rocks are right in the track of vessels—would it be possible I say, for those men to impart to us that information so useful to our shipping? I say unhesitatingly—yes, and the project I am going to develope now, and that I have already broached to several persons, as it forms part of the telegraph system that I think ought to be established around our coasts, would supply the means by which we could obtain this information.

It is simple and easy of accomplishment, as every one will see. But simple and easy things are sometimes the most difficult to get a Government or a people to do.

The Bird Rocks lie, as I have said, in the middle of the Gulf nearly. They are at a distance of 17 miles from the east point of the Magdalen Islands in a S. S. W. direction nearly; and the Islands themselves, about 36 miles in length, extend in the same direction, and from Amherst Island, the southernmost of the group, to the north coast of Prince Edward's Island, the distance is only 45 miles.

Well, let us run a submarine cable from the latter Island to Amherst Island, build a land line over the Magdalen Islands (to which the people of the Islands would contribute a good share, I am sure) as far as the east point, and from this point lay a submarine cable to the Bird Rocks, and you will have those vigilant sentinels on the Bird Rocks in constant communication with us and every part of this continent, day and night, winter and summer, and spring and fall.

You would know the state of the Gulf at all moments; be sure when the Gulf is in fit state to be entered by a steamer in the spring; and this project is very feasible, as the landing places for the submarine cables are everywhere favorable, and the bottom of the sea on which the cable would have to lie, of moderate depth and free from rocks.

With such a telegraphic line, we should not only know the state of the ice in the Gulf, but we should know where most of the missing steamers are, and how and where to render them assistance, if necessary. But this telegraph would not only be useful in the way I have just mentioned, it would be of the greatest service in a general way to our shipping and the fisheries. And the population of the Magdalen Islands, who contribute so much to the trade and the revenue of this country, and who, for six months every year, are separated from the outside world, would be much benefitted by it, and they have the right to some attention on the part of the country. Let us then do what other countries would have done long ago, had they been in our place. Let us do like Norway, for instance, a country not possessed of more resources than we, who has girded all her maritime coasts, not only as far as Hammerfest, in latitude 70 North, and the most northern seaport of any importance in the world, but passed the North Cape, in Finland, and reached as far as the White Sea. And not only ordinary and semaphorical stations are erected along that extensive line, but in many places the telegraph has been extended to the extreme points of the coast, such as at the celebrated Loffoden Islands, where it is well known some of the most important cod fisheries in the world are carried on, for the sole purpose of aiding in the working and the development of that branch of industry.

Can we not do as much as Norway? We do a great deal, it is true, in this country, but it is mostly all West. Let us turn some of our attention towards the East, we, the real maritime population of the Province of Quebec--wealth lies there, if we have a mind to gather it.

I have placed in the Exchange a telegraph chart of Norway, which shows the telegraph system of that country.

Have I been comprehensive?

I hope so.

Then let us go to work earnestly, and not waste our time and energy in discussion, often useless, in the attempt to carry out projects of doubtful practicability.

Now a few words in reference to the cost of this line of telegraph.

The expense of building would be, according to competent persons, below $40,000, and the promise of a subsidy of, say, four or five thousand dollars annually for a certain number of years, with an agreement that the Government steamers would aid in the laying and in the repairing of the line, would, I am almost sure, induce a company to enter into the project and accomplish it.

The local telegraph traffic at the Magdalen Islands would be considerable, as the merchants, the transient traders, and the fishermen of that place would often require to communicate, especially in winter, with their correspondents in Halifax, Pictou and Quebec, while the crews of the vessels (from 1,000 to 1,500) who visit those places from the Maritime Provinces and the United States, would, during the season of navigation, give daily employment to the several stations that would have to be erected on the Magdalen Islands, for the use of the fisheries and the navigation.

Let us not lose sight of the usefulness of maritime telegraphs for the saving of persons and property. Let us not forget that the *Delta*, once a beautiful steamer, worth, with her cargo, $350,000, is now a wreck on the shore near Cape de Chatte, and that, had there been a telegraph there, a few dollars spent in despatches to Quebec, would have procured in time the necessary assistance and would have saved her. I have Mr. George Davie as an authority for saying so, and I have already explained how the barque *Eleonore*, belonging to Mr. Rosa, might also have been saved in 1870, had there been a telegraph at Fox River at that time.

The saving of one vessel would be more than the cost of the building of the telegraph.

P. FORTIN.

## THE SENTINELS OF THE ST. LAWRENCE.

(*From the Quebec Morning Chronicle of the 7th May*, 1875.)

We beg to draw the attention of our readers to a letter on our first page communicated by Hon. Mr. Fortin, dealing with the necessity of telegraphic communication along the coast of the St. Lawrence, and especially such communication as will give the trade of the Dominion command of all the shipping intelligence of the Gulf. Mr. Fortin is naturally struck by the non-arrival of the *Polynesian*, a vessel with many hundred precious souls on board, and five other steamers, yet encompassed, as he believes, with ice, and unable to make their way to Quebec; and he asks why is it that we have no means of learning of the whereabouts of these vessels? The Bird Rocks stand in the middle of the Gulf, surmounted by a lighthouse, carefully guarded and maintained, and commanding a view of every vessel entering the St. Lawrence. The *Polynesian* or any other vessel could not possibly escape the scrutiny of the watchers—the sentinels, as Mr. Fortin expressively calls them, of the Gulf—and if any help were needed, in any sense, they would, were communication possible, be in a position to command all that Quebec and Montreal affords. At the present time, when the hopes of the Dominion are eagerly strained over the ice covered waste stretching from Quebec to Gaspé Point, a word from the Bird Rocks would be invaluable, but Father Point, Fox River and Matane are inexorably silent, and there is no cessation of suspense. Minutes, hours and days pass and give no sign.

Mr. Fortin believes, and we fully agree with him, that "the watchers on the Bird Rocks have seen the steamers pass, they may see them yet. They know the state of ice in which these steamers are fastened. If there are any means of relieving the latter they know it too * * * * * and all this information that would be so useful to us, and which thousands on this side as well as on the other side of the Atlantic would give so much to acquire, they cannot communicate to us." This truth is pressed upon us at the present time with particular force, and with it the soundness of the principle enunciated by Dr. Fortin, that communication should, in the interest of navigation and commerce, be opened with the "Sentinels of the St. Lawrence" by means of a telegraph cable. There is no one with any knowledge of the requirements of the country who can possibly doubt the wisdom of advances which have been thrust so practically upon us in the present spring by the suspense and anxiety which have been the leading features of life in the Dominion for the past ten days. We should be able, at any rate, to do as much as Norway. From the North Cape to Christiana, in every fiord, every bay, inlet and indentation of that serrated coast, from the Loffodens to the mainland, every station is connected by telegraph lines and cables. The whole sea board of the peninsula is in communica- with the capital, and the service is so maintained that from the bleak shores of the White Sea Finland to Aalsen, Stavanger and Hammerfest, the state of the weather, the progress of fishing, and chances of success or disaster is known and gauged. Mr. Fortin has very properly called attention to the uses of the telegraph in the territories of the Scandinavian ally, whose shipping, we are sorry to note, is declining in our port, and though he does not actually reproach the Department of Marine and Fisheries with falling behindhand, yet he conveys a hint of a very incisive character.

We thoroughly agree with Mr. Fortin in his argument that we should girdle our coast with a belt of telegraphs, placing our commercial centres in immediate communication with every important point on the St. Lawrence and in the Gulf. Large as are the strides in this direction which have been made within the past few years, much yet remains to be done, much that must be executed by the Canadian Government; for the shipping trade of Canada is increasing so vastly that every possible accommodation must be provided for it; the St. Lawrence must be lighted at night like a leading street in a well organized city (not like Quebec), and communication rendered as prompt and reliable as the working of a fire alarm telegraph. Mr. Fortin points out a way of realizing these requirements; he believes it is possible to make a Gulf telegraph line profitable, even as a business investment, and he shows

that, so far as the interests of the Dominion, and the preservation of her wealth are concerned, the saving of a single vessel by timely information, would more than compensate for the cost of laying, at the public expense, a cable from the Bird Rocks to the mainland. We commend the letter of the ex-Commissioner of Crown Lands for this Province to the attention of the Government and the public. His experience of the St. Lawrence and the Gulf and his well-tried ability, give to his arguments a weight and influence which we need not refer to here. It is not alone to-day that he has urged the prosecution of maritime telegraphs, but he has for years exerted himself in perfecting the system of communication along the coast, and if he has not thoroughly succeeded, the fault does not lie on his shoulders, for his zeal has known no abatement. We can only trust that the subject he has so ably dealt with at a time when the hopes of the whole country are strained to their utmost, will be productive of beneficial fruit, and that, before another year passes, the "Sentinels of the St. Lawrence" will be provided with the eloquent tongues of electricity, with which to speak of the good fortunes or the vicissitudes of our Canadian commercial marine.

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QUEBEC, 17th February, 1876.

The question of telegraphic communication to connect the mainland with the great islands of the Gulf of St. Lawrence, such as Anticosti and the Magdalen Islandstand with the remote coasts forming the north shore of the River St. Lawrence, hus forming a connection with our telegraphic system, is of so important a character, as respects the daily requirements of our navigation and the future of our merchant marine, that we consider that the public will thank us for the publication, in pamphlet form, of letters addressed by the Hon. Dr. P. Fortin, Speaker of the Legislative Assembly, to several journals in this city, one in the month of May, 1875, and the other in the month of January last; the object of these letters being to show the utility, or we should rather say, the necessity of such means of communication and to explain how susceptible of realization and advantageous is the schemewhich he recommends.

It is well known that the islands mentioned above are, by natural forces, separated from the rest of the world during five months of the year. For no vessel, whether propelled by sails or by steam, can reach those islands during the winter on account of the floating ice with which the Gulf of St. Lawrence is filled.

Ever since the first settlement of the country, the islands in question have been the scene of maritime disasters, ten times more serious and more disastrous than the whole of those which have occurred at other points on the Gulf coast, as respects both crews and passengers and vessels and their lading. For it is impossible during the winter, to give any assistance to wrecked vessels; and at all other times of the year, when the season is even favourable elsewhere, the necessary help can only be got there after encountering obstacles of an almost insurmountable description. This, we may remark, is fully explained in the letters.

We may say that the question has been logically dealt with, and with a thorough knowledge of the subject. The letters are replete with sentiments of humanity and generosity, which command our highest admiration. To the Hon. Mr. Fortin belongs the honor of having enunciated this philanthropic idea which is at the same time destined to prove the safeguard of enormous commercial interests. From another and an entirely patriotic point of view Mr. Fortin is of opinion that the carrying out of his scheme, in conjunction with the great improvements which are being made to interior navigation, will make the ports of Montreal and Quebec important rivals to the port of New York, by diverting to their advantage the trade of the Great West.

We should add that the Boards of Trade of Montreal, Quebec, Halifax and several other cities have supported the scheme by resolutions unanimously adopted. In addition the Dominion Board of Trade, at its meeting at Ottawa, in the month of January last, also adopted a resolution unanimously recommending the Government to carry it into effect.

Nor should we omit to state that the House of Commons, during its latest session, appointed a Committee to enquire into all matters connected with the subject; and the Chairman of that Committee, the Hon. Mr. Robitaille, after a careful and minute enquiry, presented, with the unanimous consent of the Committee, a Report, accompanied by important documents, in which the system of telegraphic communication in question is strongly recommended.

And there can be no doubt but that we shall shortly see this magnificent project in full operation. And then, and then only shall we be in a position to say that the navigation of the lower part of the River and of the Gulf of St. Lawrence is surrounded by guarantees of safety and convenience, and by facilities which will enable us to contend advantageously with the ports of Portland, Boston, and above all New York, the competition of which with us is so great in extent and so injurious to our interests.—*Editor of the Canadien.*

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## PROPOSED CODE FOR FISHERY BULLETIN.

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### Our Fisheries and the Telegraph.

Ottawa, November, 1879.

Sir,—It has always appeared to me, since my connection, in 1852, with the fisheries of the Gulf and Lower River St. Lawrence, that a powerful auxiliary is wanted to the fisheries which are carried on there. This auxiliary is the telegraph, by which all the important facts or incidents which take place in a country or locality can be made known almost instantaneously.

The coast-line telegraph, which girdles the coasts of Gaspesia, affords the means of supplying, for the benefit of the fishing industry (and we know that it is the principal industry of that country), every day, and to all persons engaged in it, all the facts and incidents concerning it, which may contribute to facilitate its operations and multiply its products.

But a system is necessary to collect and arrange all these facts, and present them to the interested public in a convenient form and at suitable localities.

The form of bulletin which I send you enclosed, seems to me, after study and reflection, the most concise and useful shape to be given to these facilities. It will be seen, after examination, that all the important fishes which are fished either for food or bait, on the coasts of Gaspesia, are inscribed in it. There are also columns relating to fishing boats and to meteorological reports, &c., &c. Moreover, any despatch coming from the Meteorological Bureau at Toronto will be published, giving weather probabilities and storm warnings for the next twenty-four hours.

The bulletin will be posted, at noon, at each of the thirty-eight stations established at the various fishing centres, along the coast telegraph line, from Matane to Carleton, on an extent of sea coast of 300 marine miles, and all the fish merchants, fishermen and others will be allowed to peruse or take a copy of the said bulletin gratuitously.

The despatching of the information by each telegraph operator at the thirty-eight telegraph stations before mentioned, will begin at 10 o'clock, a.m., by the centre as well as by the extremities of the line. By means of the code, of which I send you a form, this despatching will be easy, speedy and free from errors.

You will see that, in the code, under the head of "fishing," not only are to be found the names of the food and bait fishes, but also the following words: *extra, good, average, bad, none.* By these words are expressed the different gradations in the produce of the fishing of these different fishes in each locality. This will enable the fishermen to follow, day by day, the course of the fish and to ascertain their presence, abundance or absence, in all these localities. It seems to me that this is

useful information, since the fishermen will then know where the fish abound, and especially where bait is to be found, thus having the means of procuring them, so to speak, at all times.

The bulletin will also indicate if the boats are fishing or not, and the direction and velocity of the wind, &c., &c.

In a word, I would say that this bulletin will give ample and precise information each day :—

1st. On the produce of the fishing of the day before.

2nd. On the bait supply of the preceding night.

3rd. And on the appearance of the cod fishing, the state of weather and wind of the day, up to the moment at which the despatching for the bulletin begins; and moreover, a despatch coming from the Meteorological Bureau, dated 10 o'clock a.m., indicating weather probabilities and storm warnings for the coming twenty-four hours.

The columns headed "remarks," will contain extraordinary news, and at times information relating to the fisheries carried on along the other sea coasts.

I have put myself in communication with the Montreal Telegraph Company, which, as you know, owns this Coast Line Telegraph, and I have ascertained that the collecting and despatching of all telegraphic information composing the bulletin, can be made on such reasonable conditions that the Government can hardly refuse to adopt a measure which, in the opinion of all, cannot fail to give a new impulse to our sea coast fisheries and greatly facilitate their prosecution.

It is almost needless for me to add that it is intended to extend this adaptation of telegraphy, which I now submit to you, as an auxiliary to the fisheries for the coast of Gaspé, to all our sea coasts, as these coasts become girdled by telegraph wires. The reasons for which the coasts of Gaspesia are first indicated for the adaptation of this system being that they are now, in their whole length, girded by telegraph wires and supplied with telegraph stations in all the fishing localities.

I think it my duty to submit this project to your consideration; and I enclose for your perusal a series of letters (twenty-five in number) from scientists, fishery outfitters, leading fishermen and others engaged in the fishing industry, testifying as to its utility and influence on the fishing industry of the Dominion, and also to its value to our coasting trade and foreign navigation.

I have the honor to be, Sir,
Your obedient servant,

P. FORTIN.

The Honorable
The Minister of Public Works,
Ottawa.

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MONTREAL, 20th May, 1881.

SIR,—On my return to Montreal I did not fail to see the officials of the Montreal Telegraph Company, in order to examine once more with them the question of the best means to be adopted for transmitting from one telegraph office to another, the information required for the making up of the Fishery Bulletin.

The following is what appeared to be the most easy and most practicable :

At 10 a.m., all the telegraph stations being ready, the most remote station at one of the extremities of the system, say No. 1, sends its items of information in accordance with the code, and the operators at all the other stations, say from 2 to 30, receive them and enter them at once in the bulletin. Then the second station does a like task for the stations from 3 to 30 and for No. 1. The 3rd station next supplies its information to those from 4 to 30 and to 1 and 2; and so on with all the other stations. This makes, for the 30 stations, 30 different messages sent by each one to 29 different stations each time, that is to say, 30 messages sent and 841 received each day.

For the seven months during which the fishery season and season of navigation last, this would make 6,300 messages sent and 176,610 (one hundred and seventy-six thousand six hundred and ten) received. Over and above the local information, there would also be the reports of Toronto Meteorological Office to be transmitted to all the stations, but I must mention that the company are already paid for that.

The work necessitated by all these messages will last about *one hour and a half.*

As the Departments of Marine and Public Works will, I presume, decide as to what items of information will make up the bulletin, they will doubtless furnish the forms for recording the same. Now, if I might venture to offer advice, it would be the following: It is essential to the extension of the fishing industry in Canada that this bulletin should be published and posted up at all the fishing centres. This will be one of the surest means of stimulating and sensibly increasing the yield of this industry. Norway, a country so eminently practical, more especially in matters relating to fisheries and navigation, has used the telegraph as an auxiliary to the fishing industry for some fifteen years past, at the least, and derives the best results therefrom.

We perceive this ourselves in Canada, since the Norwegians are competing with us in a manner which is daily becoming more injurious to our trade in dry cod, on the foreign markets to which we ship that product. I ask, at least, for a fair and honest trial of this bulletin, and with that view I suggest that, for this year, the bulletin system shall comprise but 30 stations, namely, from Cap de Chatte to Paspebiac. We know there is little fishing beyond those extreme points.

To-morrow I shall have the honor to submit to you a copy of the form of bulletin I have already submitted to the Minister of Marine, and which has, I think, been referred to you, with some corrections I thought well to make in order to give greater value to the bulletin and render it more comprehensive.

I have the honor to be, Sir,
Your obedient servant,

P. FORTIN.

Hon. H. L. LANGEVIN, C.B.

## CODE FOR FISHERY BULLETIN—CODE POUR BULLETIN DE PÊCHE.

### FIRST PART.

TO SEND.

| YESTERDAY. | HIER. | |
|---|---|---|
| *Fishing* | *Pêche* | |
| Bank Cod | Morue de Banc | A. |
| Shore Cod | Morue de Côte | B. |
| Caplin | Capelan | C. |
| Clam | Coque | D. |
| Herring | Hareng | E. |
| Lance | Lançon | F. |
| Mackerel | Maquereau | G. |
| Squid | Encornet | H. |
| Salmon | Saumon | J. |
| None | Pas | 1 |
| Poor | Mauvaise | 2 |
| Average | Moyenne | 3 |
| Good | Bonne | 4 |
| Extra | Extra | 5 |
| *Boats* | *Bateaux* | |
| do in | do à l'ancre | N. |
| do out | do sortis | O. |
| *Weather* | *Temps* | |
| Warm | Chaud | P. |
| Cold | Froid | Q. |
| Dry | Sec | S. |
| Fog | Brume | T. |
| Rain | Pluie | W. |
| Snow | Neige | X. |
| *Wind* | *Vent* | |
| North | Nord | 1 |
| East | Est | 2 |
| South | Sud | 3 |
| West | Ouest | 4 |
| North-East | Nord-Est | 5 |
| South-East | Sud-Est | 6 |
| South-West | Sud-Ouest | 7 |
| North-West | Nord-Ouest | 8 |
| Calm | Calme | I. |
| Moderate | Modéré | M. |
| Strong | Fort | R. |
| Gale | Tempête | V. |

| TO-DAY. | AUJOURD'HUI. | |
|---|---|---|
| *Bait* | *Boitte* | |
| Supply of, during preceding night | Approvisionnement de, la nuit précédente | K. |
| Kind most abundant | Espèce la plus abondante | U. |
| Appearance of Cod Fishing | Apparence de la pêche de la morue | Y. |
| Boats | Bateaux | |
| Weather | Temps | |
| Wind | Vent | |

Report of Yesterday's Fishing, Temperature, Wind, &c., the.....1881.

| Number. | Telegraph Station of | Distance, Miles. | Fishin for | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bank Cod. | Shore Cod. | Capelan. | Clam. | Herring. | Lance. | Mackerel. | Squid. | Salmon. |
| 1 | Matane..... | ... | | | | | | | | | |
| 2 | Ste. Félicite..... | 12 | | | | | | | | | |
| 3 | Cap de Chatte, lighthouse. | 31 | | | | | | | | | |
| 4 | Cap de Chatte, Village. ... | 3 | | | | | | | | | |
| 5 | Ste. Anne des Monts..... | 9 | | | | | | | | | |
| 6 | Rivière à la Marte..... | 17 | | | | | | | | | |
| 7 | Mont Louis..... | 22 | | | | | | | | | |
| 8 | Cap Madeleine. ..... | 20 | | | | | | | | | |
| 9 | Rivière Madeleine ..... | 1 | | | | | | | | | |
| 10 | Grand Vallée ..... | 9 | | | | | | | | | |
| 11 | Chloridorme. ..... | 15 | | | | | | | | | |
| 12 | Grand Etang..... | 9 | | | | | | | | | |
| 13 | Rivière au Renard..... | 21 | | | | | | | | | |
| 14 | L'Anse aux Griffons..... | 7 | | | | | | | | | |
| 15 | Cap des Rosiers..... | 8 | | | | | | | | | |
| 16 | Grand Grève..... | 11 | | | | | | | | | |
| 17 | Péninsula..... | 11 | | | | | | | | | |
| 18 | Gaspé..... | 15 | | | | | | | | | |
| 19 | Sandy Beach..... | 3 | | | | | | | | | |
| 20 | Douglastown... ..... | 4 | | | | | | | | | |
| 21 | Pointe St. Pierre. ..... | 15 | | | | | | | | | |
| 22 | Barachois de la Malbaie.... | 5 | | | | | | | | | |
| 23 | Percé ..... | 11 | | | | | | | | | |
| 24 | L'Anse du Cap..... | 9 | | | | | | | | | |
| 25 | La Grande Rivière..... | 10 | | | | | | | | | |
| 26 | Petit Pabos..... | 4 | | | | | | | | | |
| 27 | Grand Pabos. ..... | 6 | | | | | | | | | |
| 28 | Newport..... | 14 | | | | | | | | | |
| 29 | Port Daniel..... | 17 | | | | | | | | | |
| 30 | Shigouack..... | 11 | | | | | | | | | |
| 31 | Paspebiac..... | 7 | | | | | | | | | |
| 32 | New Carlisle. ..... | 5 | | | | | | | | | |
| 33 | Bonaventure. ..... | 11 | | | | | | | | | |
| 34 | Kerr's..... | 14 | | | | | | | | | |
| 35 | New Richmond..... | 11 | | | | | | | | | |
| 36 | Maria..... | 14 | | | | | | | | | |
| 37 | Carleton..... | 11 | | | | | | | | | |

Weathe

**Bulletin for.....1881.**

| | | | | | State of To-day's Fishing, Temperature, Wind, &c., the.....1881, up to 12 hrs., a.m. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boats. | Temperature. | Wind. | | Remarks. | Catch of Bait during the preceding night. | Kind most abundant. | Cod Fishing, appearance of. | Boats. | Temperature. | Wind. | | Remarks. |
| | | Direction. | Velocity. | | | | | | | Direction. | Velocity. | |
| | | | | | | | | | | | | |

probabilities.